Identification of Sensitivity to Land Degradation and Desertification With Respect to Landscape Services

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Land degradation and desertification processes threaten various parts of the Earth including Mediterranean Europe and Hungary (Kertész et al. 2002). They trigger very serious problems in the third world reducing the possibilities of agricultural use of the land and creating difficulties in food supply. Climate change increases land degradation and desertification risk (Rubio and Bochet, 1998). Environmental sensitivity has been in the focus of environmental and landscape research during the past two decades (Basso et al. 2000). The objective of this paper is to present methods to characterize various areas from the aspect of sensitivity to land degradation and desertification and to apply this method for two selected landscape units of Hungary. Soil erosion sensitivity was examined in the natural macro-region of the Transdanubian Hills and desertification sensitivity in the meso-region of the Danube-Tisza Interfluve. The sensitivity of the above mentioned landscape units to degradation is determined by applying sensitivity indices. The method is well applicable for the characterization of land degradation processes, to identify the areas with different sensitivity values and decreasing quality of landscape services in order to support decision making with respect to conservation measures and land use change.

Keywords: Land degradation, desertification, soil erosion